

What is claimed is:

1. A pointing position detection device which detects the presence of a human being from an image which is photographed by a plurality of cameras, and which detects a position at which the human being is pointing, comprising:

 a section which detects a head position of the human being, including at least distance information, based upon the image;

 a section which detects a hand position of the human being, including at least distance information, based upon the image;

 a section which calculates a position of a hand tip and a main axis of the hand, based upon the hand position which has been detected; and

 a section which detects a direction in which the human being is pointing, based upon the head position which has been detected and the position of the hand tip and the main axis of the hand which have been calculated,

 wherein the position at which the human being is pointing is detected, based upon the detected direction in which the human being is pointing.

2. A pointing position detection device as described in Claim 1, further comprising a section which calculates a position of an eye, based upon the head position which has been detected, and

 wherein the section for detecting the direction in which the human being is pointing detects the direction in which the human being is pointing, based upon the position of the eye, the position of the hand tip, and the main axis of the hand.

3. A pointing position detection device as described in Claim 1, wherein the section for detecting the hand position further comprises a section which sets a predetermined search region within the image, based upon the position of the hand.
4. A pointing position detection device as described in Claim 3, wherein the main axis of the hand is detected, based upon the distribution of picture element data which make up the image of the hand present within the search region.
5. A pointing position detection device as described in Claim 1, wherein the position at which the human being is pointing is detected by calculating the intersection of the direction in which the human being is pointing and a predetermined object which is present within the image.
6. A pointing position detection device as described in Claim 2, wherein the position at which the human being is pointing is detected by calculating the intersection of the direction in which the human being is pointing and a predetermined object which is present within the image.
7. A pointing position detection device as described in Claim 3, wherein the position at which the human being is pointing is detected by calculating the intersection of the direction in which the human being is pointing and a predetermined object which is present within the image.
8. An autonomous robot comprising a pointing position detection device as described in Claim 1.

9. An autonomous robot comprising a pointing position detection device as described in
Claim 2.

10. An autonomous robot comprising a pointing position detection device as described in
Claim 3.

11. An autonomous robot comprising a pointing position detection device as described in
Claim 4.

12. An autonomous robot comprising a pointing position detection device as described in
Claim 5.

13. An autonomous robot comprising a pointing position detection device as described in
Claim 6.

14. An autonomous robot comprising a pointing position detection device as described in
Claim 7.